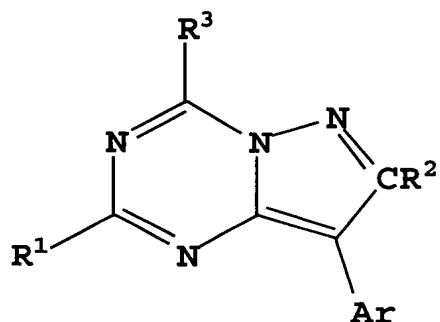


T3170



(1)

and isomers thereof, stereoisomeric forms thereof, or mixtures of stereoisomeric forms thereof, and pharmaceutically acceptable salt forms thereof, wherein:

Ar is selected from phenyl, naphthyl, pyridyl, pyrimidinyl, triazinyl, furanyl, thienyl, benzothienyl, benzofuranyl, 2,3-dihydrobenzofuranyl, 2,3-dihydrobenzothienyl, indanyl, 1,2-benzopyranyl, 3,4-dihydro-1,2-benzopyranyl, tetralinyl, each Ar optionally substituted with 1 to 5 R<sup>4</sup> groups and each Ar is attached to an unsaturated carbon atom;

R<sup>1</sup> is independently selected at each occurrence from H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, halo, CN, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>12</sub> hydroxyalkyl, C<sub>2</sub>-C<sub>12</sub> alkoxyalkyl, C<sub>2</sub>-C<sub>10</sub> cyanoalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>10</sub> cycloalkylalkyl, NR<sup>9</sup>R<sup>10</sup>, C<sub>1</sub>-C<sub>4</sub> alkyl-NR<sup>9</sup>R<sup>10</sup>, NR<sup>9</sup>COR<sup>10</sup>, OR<sup>11</sup>, SH or S(O)<sub>n</sub>R<sup>12</sup>;

R<sup>2</sup> is selected from H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>10</sub> cycloalkylalkyl, C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl, halo, CN, -NR<sup>6</sup>R<sup>7</sup>, NR<sup>9</sup>COR<sup>10</sup>, -NR<sup>6</sup>S(O)<sub>n</sub>R<sup>7</sup>, S(O)<sub>n</sub>NR<sup>6</sup>R<sup>7</sup>, C<sub>1</sub>-C<sub>4</sub> haloalkyl, -OR<sup>7</sup>, SH or -S(O)<sub>n</sub>R<sup>12</sup>;

R<sup>3</sup> is selected from NR<sup>6a</sup>R<sup>7a</sup> and OR<sup>7</sup>;

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$R^4$  is independently selected at each occurrence from:  
 $C_1$ - $C_{10}$  alkyl,  $C_2$ - $C_{10}$  alkenyl,  $C_2$ - $C_{10}$  alkynyl,  $C_3$ - $C_6$  cycloalkyl,  $C_4$ - $C_{12}$  cycloalkylalkyl,  $NO_2$ , halo, CN,  $C_1$ - $C_4$  haloalkyl,  $NR^6R^7$ ,  $NR^8COR^7$ ,  $NR^8CO_2R^7$ ,  $COR^7$ ,  $OR^7$ ,  $CONR^6R^7$ ,  $CO(NOR^9)R^7$ ,  $CO_2R^7$ , or  $S(O)_nR^7$ , where each such  $C_1$ - $C_{10}$  alkyl,  $C_2$ - $C_{10}$  alkenyl,  $C_2$ - $C_{10}$  alkynyl,  $C_3$ - $C_6$  cycloalkyl and  $C_4$ - $C_{12}$  cycloalkylalkyl are optionally substituted with 1 to 3 substituents independently selected at each occurrence from  $C_1$ - $C_4$  alkyl,  $NO_2$ , halo, CN,  $NR^6R^7$ ,  $NR^8COR^7$ ,  $NR^8CO_2R^7$ ,  $COR^7$ ,  $OR^7$ ,  $CONR^6R^7$ ,  $CO_2R^7$ ,  $CO(NOR^9)R^7$ , or  $S(O)_nR^7$ ;

$R^6$ ,  $R^7$ ,  $R^{6a}$  and  $R^{7a}$  are independently selected at each occurrence from:

-H,  
 $-C_1$ - $C_{10}$  alkyl,  $C_3$ - $C_{10}$  alkenyl,  $C_3$ - $C_{10}$  alkynyl,  $C_1$ - $C_{10}$  haloalkyl with 1-10 halogens,  $C_2$ - $C_8$  alkoxyalkyl,  $C_3$ - $C_6$  cycloalkyl,  $C_4$ - $C_{12}$  cycloalkylalkyl,  $C_5$ - $C_{10}$  cycloalkenyl, or  $C_6$ - $C_{14}$  cycloalkenylalkyl, each optionally substituted with 1 to 3 substituents independently selected at each occurrence from  $C_1$ - $C_6$  alkyl,  $C_3$ - $C_6$  cycloalkyl, halo,  $C_1$ - $C_4$  haloalkyl, cyano,  $OR^{15}$ , SH,  $S(O)_nR^{13}$ ,  $COR^{15}$ ,  $CO_2R^{15}$ ,  $OC(O)R^{13}$ ,  $NR^8COR^{15}$ ,  $N(COR^{15})_2$ ,  $NR^8CONR^{16}R^{15}$ ,  $NR^8CO_2R^{13}$ ,  $NR^{16}R^{15}$ ,  $CONR^{16}R^{15}$ , aryl, heteroaryl or heterocyclyl,  
 -aryl, aryl( $C_1$ - $C_4$  alkyl), heteroaryl, heteroaryl( $C_1$ - $C_4$  alkyl), heterocyclyl or heterocyclyl( $C_1$ - $C_4$  alkyl);

alternatively,  $NR^6R^7$  and  $NR^{6a}R^{7a}$  are independently piperidine, pyrrolidine, piperazine, N-methylpiperazine,

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morpholine or thiomorpholine, each optionally substituted with 1-3 C<sub>1</sub>-C<sub>4</sub> alkyl groups;

R<sup>8</sup> is independently selected at each occurrence from H or C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sup>9</sup> and R<sup>10</sup> are independently selected at each occurrence from H, C<sub>1</sub>-C<sub>4</sub> alkyl, or C<sub>3</sub>-C<sub>6</sub> cycloalkyl;

R<sup>11</sup> is selected from H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, or C<sub>3</sub>-C<sub>6</sub> cycloalkyl;

R<sup>12</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl or C<sub>1</sub>-C<sub>4</sub> haloalkyl;

A<sup>1</sup>  
cont  
R<sup>13</sup> is selected from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>8</sub> alkoxyalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>12</sub> cycloalkylalkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, heteroaryl or heteroaryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-;

R<sup>15</sup> and R<sup>16</sup> are independently selected at each occurrence from H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>4</sub>-C<sub>16</sub> cycloalkylalkyl, except that for S(O)<sub>n</sub>R<sup>15</sup>, R<sup>15</sup> cannot be H;

aryl is phenyl or naphthyl, each optionally substituted with 1 to 5 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, halo, C<sub>1</sub>-C<sub>4</sub> haloalkyl, cyano, OR<sup>15</sup>, SH, S(O)<sub>n</sub>R<sup>15</sup>, COR<sup>15</sup>, CO<sub>2</sub>R<sup>15</sup>, OC(O)R<sup>15</sup>, NR<sup>8</sup>COR<sup>15</sup>, N(COR<sup>15</sup>)<sub>2</sub>, NR<sup>8</sup>CONR<sup>16</sup>R<sup>15</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>15</sup>, NR<sup>16</sup>R<sup>15</sup>, and CONR<sup>16</sup>R<sup>15</sup>;

heteroaryl is pyridyl, pyrimidinyl, triazinyl, furanyl, pyranyl, quinolinyl, isoquinolinyl, thienyl, imidazolyl, thiazolyl, indolyl, pyrrolyl, oxazolyl, benzofuranyl, benzothienyl, benzothiazolyl, isoxazolyl, pyrazolyl, 2,3-dihydrobenzothienyl or

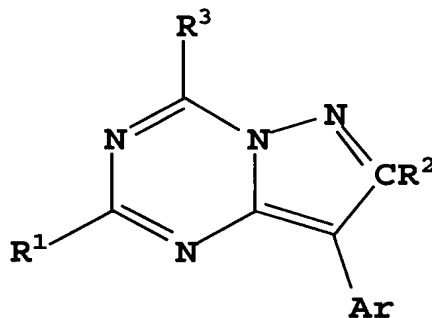
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2,3-dihydrobenzofuranyl, each being optionally substituted with 1 to 5 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, halo, C<sub>1</sub>-C<sub>4</sub> haloalkyl, cyano, OR<sup>15</sup>, SH, S(O)<sub>n</sub>R<sup>15</sup>, -COR<sup>15</sup>, CO<sub>2</sub>R<sup>15</sup>, OC(O)R<sup>15</sup>, NR<sup>8</sup>COR<sup>15</sup>, N(COR<sup>15</sup>)<sub>2</sub>, NR<sup>8</sup>CONR<sup>16</sup>R<sup>15</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>15</sup>, NR<sup>16</sup>R<sup>15</sup>, and CONR<sup>16</sup>R<sup>15</sup>;

heterocyclyl is saturated or partially saturated heteroaryl, optionally substituted with 1 to 5 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, halo, C<sub>1</sub>-C<sub>4</sub> haloalkyl, cyano, OR<sup>15</sup>, SH, S(O)<sub>n</sub>R<sup>15</sup>, COR<sup>15</sup>, CO<sub>2</sub>R<sup>15</sup>, OC(O)R<sup>15</sup>, NR<sup>8</sup>COR<sup>15</sup>, N(COR<sup>15</sup>)<sub>2</sub>, NR<sup>8</sup>CONR<sup>16</sup>R<sup>15</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>15</sup>, NR<sup>15</sup>R<sup>16</sup>, and CONR<sup>16</sup>R<sup>15</sup>;

n is independently at each occurrence 0, 1 or 2.

<sup>29</sup>  
~~33~~. A method of treating depression in mammals, comprising administering to the mammal a therapeutically effective amount of a compound of Formula (1):



(1)

and isomers thereof, stereoisomeric forms thereof, or mixtures of stereoisomeric forms thereof, and pharmaceutically acceptable salt forms thereof, wherein:

Ar is selected from phenyl, naphthyl, pyridyl, pyrimidinyl, triazinyl, furanyl, thienyl, benzothienyl, benzofuranyl, 2,3-dihydrobenzofuranyl, 2,3-dihydrobenzothienyl, indanyl, 1,2-benzopyranyl, 3,4-dihydro-1,2-benzopyranyl, tetralinyl, each Ar optionally substituted with 1 to 5  $R^4$  groups and each Ar is attached to an unsaturated carbon atom;

*Al*  
*cont*

$R^1$  is independently selected at each occurrence from H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, halo, CN, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>12</sub> hydroxyalkyl, C<sub>2</sub>-C<sub>12</sub> alkoxyalkyl, C<sub>2</sub>-C<sub>10</sub> cyanoalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>10</sub> cycloalkylalkyl,  $NR^9R^{10}$ , C<sub>1</sub>-C<sub>4</sub> alkyl- $NR^9R^{10}$ ,  $NR^9COR^{10}$ ,  $OR^{11}$ , SH or  $S(O)_nR^{12}$ ;

$R^2$  is selected from H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>10</sub> cycloalkylalkyl, C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl, halo, CN, - $NR^6R^7$ ,  $NR^9COR^{10}$ , - $NR^6S(O)_nR^7$ ,  $S(O)_nNR^6R^7$ , C<sub>1</sub>-C<sub>4</sub> haloalkyl, - $OR^7$ , SH or - $S(O)_nR^{12}$ ;

$R^3$  is selected from  $NR^6aR^7a$  and  $OR^7$ ;

$R^4$  is independently selected at each occurrence from: C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>2</sub>-C<sub>10</sub> alkenyl, C<sub>2</sub>-C<sub>10</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>12</sub> cycloalkylalkyl, NO<sub>2</sub>, halo, CN, C<sub>1</sub>-C<sub>4</sub> haloalkyl,  $NR^6R^7$ ,  $NR^8COR^7$ ,  $NR^8CO_2R^7$ ,  $COR^7$ ,  $OR^7$ ,  $CONR^6R^7$ ,  $CO(NOR^9)R^7$ ,  $CO_2R^7$ , or  $S(O)_nR^7$ , where each such C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>2</sub>-C<sub>10</sub> alkenyl, C<sub>2</sub>-C<sub>10</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl and C<sub>4</sub>-C<sub>12</sub> cycloalkylalkyl are optionally substituted with 1 to 3 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>4</sub> alkyl, NO<sub>2</sub>, halo, CN,  $NR^6R^7$ ,  $NR^8COR^7$ ,  $NR^8CO_2R^7$ ,  $COR^7$ ,  $OR^7$ ,  $CONR^6R^7$ ,  $CO_2R^7$ ,  $CO(NOR^9)R^7$ , or  $S(O)_nR^7$ ;

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R<sup>6</sup>, R<sup>7</sup>, R<sup>6a</sup> and R<sup>7a</sup> are independently selected at each occurrence from:

-H,

-C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>3</sub>-C<sub>10</sub> alkenyl, C<sub>3</sub>-C<sub>10</sub> alkynyl, C<sub>1</sub>-C<sub>10</sub> haloalkyl with 1-10 halogens, C<sub>2</sub>-C<sub>8</sub> alkoxyalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>12</sub> cycloalkylalkyl, C<sub>5</sub>-C<sub>10</sub> cycloalkenyl, or C<sub>6</sub>-C<sub>14</sub> cycloalkenylalkyl, each optionally substituted with 1 to 3 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, halo, C<sub>1</sub>-C<sub>4</sub> haloalkyl, cyano, OR<sup>15</sup>, SH, S(O)<sub>n</sub>R<sup>13</sup>, COR<sup>15</sup>, CO<sub>2</sub>R<sup>15</sup>, OC(O)R<sup>13</sup>, NR<sup>8</sup>COR<sup>15</sup>, N(COR<sup>15</sup>)<sub>2</sub>, NR<sup>8</sup>CONR<sup>16</sup>R<sup>15</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>13</sup>, NR<sup>16</sup>R<sup>15</sup>, CONR<sup>16</sup>R<sup>15</sup>, aryl, heteroaryl or heterocyclyl, -aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl), heteroaryl, heteroaryl(C<sub>1</sub>-C<sub>4</sub> alkyl), heterocyclyl or heterocyclyl(C<sub>1</sub>-C<sub>4</sub> alkyl);

alternatively, NR<sup>6</sup>R<sup>7</sup> and NR<sup>6a</sup>R<sup>7a</sup> are independently piperidine, pyrrolidine, piperazine, N-methylpiperazine, morpholine or thiomorpholine, each optionally substituted with 1-3 C<sub>1</sub>-C<sub>4</sub> alkyl groups;

R<sup>8</sup> is independently selected at each occurrence from H or C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sup>9</sup> and R<sup>10</sup> are independently selected at each occurrence from H, C<sub>1</sub>-C<sub>4</sub> alkyl, or C<sub>3</sub>-C<sub>6</sub> cycloalkyl;

R<sup>11</sup> is selected from H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, or C<sub>3</sub>-C<sub>6</sub> cycloalkyl;

R<sup>12</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl or C<sub>1</sub>-C<sub>4</sub> haloalkyl;

R<sup>13</sup> is selected from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>8</sub> alkoxyalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>4</sub>-C<sub>12</sub> cycloalkylalkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, heteroaryl or heteroaryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-;

R<sup>15</sup> and R<sup>16</sup> are independently selected at each occurrence from H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>4</sub>-C<sub>16</sub> cycloalkylalkyl, except that for S(O)<sub>n</sub>R<sup>15</sup>, R<sup>15</sup> cannot be H;

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aryl is phenyl or naphthyl, each optionally substituted with 1 to 5 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, halo, C<sub>1</sub>-C<sub>4</sub> haloalkyl, cyano, OR<sup>15</sup>, SH, S(O)<sub>n</sub>R<sup>15</sup>, COR<sup>15</sup>, CO<sub>2</sub>R<sup>15</sup>, OC(O)R<sup>15</sup>, NR<sup>8</sup>COR<sup>15</sup>, N(COR<sup>15</sup>)<sub>2</sub>, NR<sup>8</sup>CONR<sup>16</sup>R<sup>15</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>15</sup>, NR<sup>16</sup>R<sup>15</sup>, and CONR<sup>16</sup>R<sup>15</sup>;

heteroaryl is pyridyl, pyrimidinyl, triazinyl, furanyl, pyranyl, quinolinyl, isoquinolinyl, thienyl, imidazolyl, thiazolyl, indolyl, pyrrolyl, oxazolyl, benzofuranyl, benzothienyl, benzothiazolyl, isoxazolyl, pyrazolyl, 2,3-dihydrobenzothienyl or 2,3-dihydrobenzofuranyl, each being optionally substituted with 1 to 5 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, halo, C<sub>1</sub>-C<sub>4</sub> haloalkyl, cyano, OR<sup>15</sup>, SH, S(O)<sub>n</sub>R<sup>15</sup>, -COR<sup>15</sup>, CO<sub>2</sub>R<sup>15</sup>, OC(O)R<sup>15</sup>, NR<sup>8</sup>COR<sup>15</sup>, N(COR<sup>15</sup>)<sub>2</sub>, NR<sup>8</sup>CONR<sup>16</sup>R<sup>15</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>15</sup>, NR<sup>16</sup>R<sup>15</sup>, and CONR<sup>16</sup>R<sup>15</sup>;

heterocyclyl is saturated or partially saturated heteroaryl, optionally substituted with 1 to 5 substituents independently selected at each occurrence from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, halo, C<sub>1</sub>-C<sub>4</sub> haloalkyl, cyano, OR<sup>15</sup>, SH, S(O)<sub>n</sub>R<sup>15</sup>, COR<sup>15</sup>,

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